

United States Treasury Department

March 1st 1854

Sir,

The invoice of the 27th of February was duly received. The expenses incident to bringing the Steam Boat Act into operation, are paid out of a special appropriation. You will please to send in ^{an} account at the end of each quarter of the expense of preparing the feasible bill. But the expenses incurred at the commencement of the business, in the purchase of apparatus, metals &c will be paid immediately in the account being forwarded with the proper vouchers.

It is not in the power of this Department to give any further account than has already been forwarded to you of the experiments made at the Navy Yard in this city. Of those made when Mr. Allen was chief engineer, records appear to have been kept. And Mr. Copeland, now recently employed in the business, is free to give the particulars of his experiments in this, especially paid for the same. To demand so unreasonable this Department can give no countenance, as Mr. Copeland made his experiments with apparatus and metals, and in a building supplied by the public, and received a stipulated fee for his services. Besides

this, Mr Hunt the present Chief Engineer at the Navy
Yards, doubts if what Mr. C. Ireland has to communicate
would be of any use to you.

If you speak of "the want of absolute reliability
upon the melting point of the alloys, chiefly arising from
the irregularities of alloying into them of greater or less fusibility"
I am much interested to have been made to this Department,
it would seem that the melting point depends not solely
on the quality and proportion of the metals entering into
the alloy, but, in part, on the degree of heat used in preparing
it, and on the length of time the heat is applied, different
degrees of heat producing different structures of the compound
metals.

In relation to the present, it may not be unimportant
to observe that a majority of the Board of Supervising Inspectors
appear to be of opinion that a better dependence can be placed
on the alloys, insofar they are applied in a manner somewhat
similar to that provided for in Admiral Lord Lyons' safety
guards. On this subject you may have something to forward
in the form of a recent publication, a copy of which is sent to you
by the day mail. I am, Sir, very respectfully,
Dear Sir, of the last and most important for this Department
in relation to the subject, accompanying it, are

beginning on page 298, you will find the Report of
the Board of Supervising Inspectors.

By applying at the Custom House, you will learn the
whereabouts of the Local Inspector of Steam Boats at Philadelphia.
From them you will be able to procure specimens of the
alloy plugs in the form in which they have hitherto been used.

You request instructions "in relation to the different points
of temperature (or pressure of steam) at which the alloys are
to fuse." On this point, Mr. C. Ireland, the Supervising
Inspector at New York, has been requested to correspond
with you. You will receive an order from him for a quantity
of fusible alloy to be sent to California. This you will
please to fill as soon as you conveniently can, as such an
order was sent from this Department to the Navy Department
more than six months ago, but, through some unexplained
causes, never reached the Chief Engineer at the Navy Yards.

Very Respectfully,
James Guthrie
Secretary of Navy

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J. C. Booth Esq

Editor of the Refiner

U. S. Mint

Philadelphia

1854
March 14th
Jas Guthrie
Washington
D.C.

James Guthrie
Secretary of Navy

J. B. Smith
J. B. Smith
J. B. Smith